II

Land Use Plans and Policies

(See *Appendix 1* in the *Volcano Heights Planning Study Report* for a more detailed review of existing policies).

The following land use plans and policies govern development in the Plan Area

Rank 1	Albuquerque-Bernalillo County Comprehensive Plan (CP) Albuquerque Planned Growth Strategy (PGS)
Rank 2	West Side Strategic Plan (WSSP)
Rank 3	Northwest Mesa Escarpment Plan (NWMEP)
Other	Executive Communication (EC-35)

Applicable policies can be summarized as follows:

- New development may occur where vacant land is contiguous to existing or programmed urban facilities (CP)
- Service extensions for areas with multiple ownership and premature platting only when there is reassembly or sector plans provided (CP)
- Criteria for designation of new activity centers that include transit service potential, fiscal impact, capacity of public services, market potential, potential for shaping the built environment (CP, WSSP)
- Design controls to protect the escarpment, archeological and other resources through controls on height, runoff, color and materials (NWMEP)
- Preservation of views to and from the volcanic escarpment through setback, height and building massing limits (WSSP)
- In the Volcano Cliffs area, the City shall encourage assembly of lots of multiple owners, cluster housing to provide more open space and efficient provision of utilities, use of xeriscape landscaping and other water conservation techniques; to be encouraged through provision of master plan infrastructure prior to normal extension of infrastructure in Priority 2 areas when cost of infrastructure is exceptionally low to the City and in a way that avoids scattered site development in adjoining areas (WSSP)
- Orderly, efficient (from the standpoint of urban infrastructure), and environmentally sensitive development of the Volcano Cliffs are through planning approvals and infrastructure extension determinations (WSSP)
- Criteria for provision of water service include minimum of 100 acres assembly, adequate street network, 30% (not private) common open space, clustering of housing, xeriscape and water conservation as determined by the City Council (EC35).

III
Planning Process

1. Coordination With Land Owners and Agencies

The Planning Management Team included the City Council Office and the Planning Department. The Planning Team consisted of land use, architectural, urban design, open space, transportation and planning consultants.

The Planning Team gathered extensive information on plans for public infrastructure, including drainage, water and transportation systems, and on land use plans and policies. The team held interviews with the Albuquerque Metropolitan Area Flood Control Authority (AMAFCA), Albuquerque Public Schools, the City-County Water Authority, the Mid Region Council of Governments (MRCOG), economic development agencies, and City Transportation, Planning, Parks and Recreation, and Transit departments and held a series of coordination sessions in September 2005. In addition, an interview was held with Rio Rancho officials regarding the redevelopment and land assembly process that Rio Rancho has used to facilitate development in areas of obsolete plats. (See *Appendix* of the *Volcano Heights Planning Study.*)

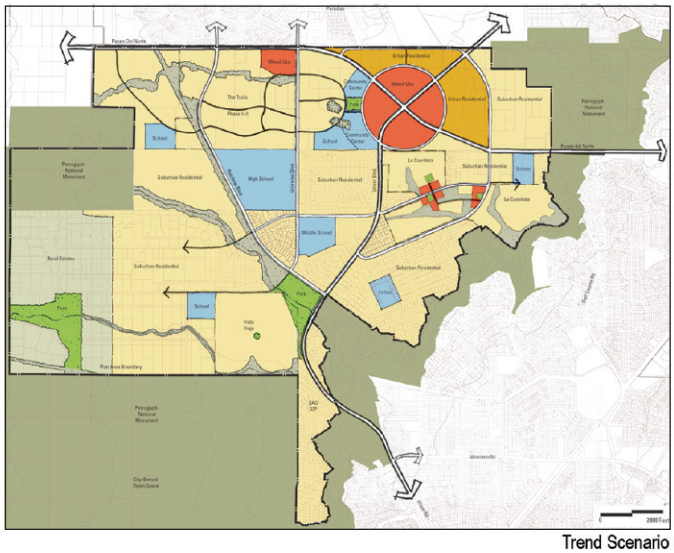
Interviews with the National Park Service, City Open Space staff, and State officials provided information on the Petroglyph National Monument and other open space needs. The team interviewed experts knowledgeable regarding the area's archeology, anthropology and Hispanic and Native American history to understand the cultural background of the area.

Private Development Plans

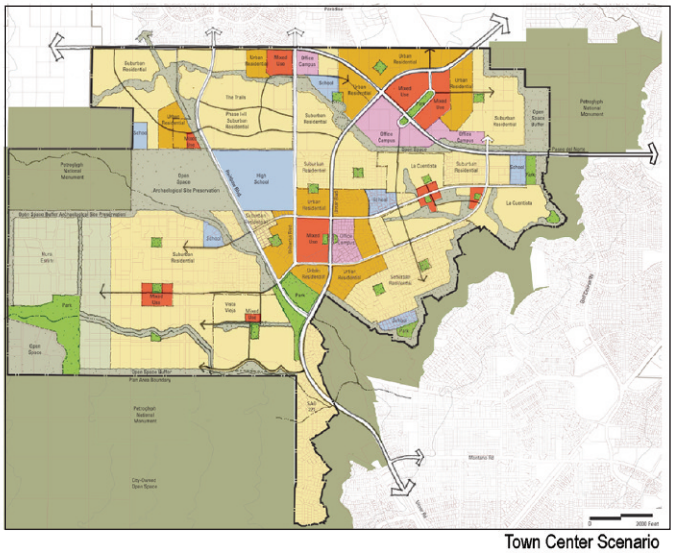
In September and October of 2004, the meetings and interviews with City and County planning staff, developers, and property owners yielded information on the current status of development plans. Discussions with the developers of Vista Vieja subdivision occurred throughout the planning process, resulting in adjustments to their master plan that added a hiking and bicycle trail, a central plaza, other "walk-to" amenities, and greater variety of housing types. Similarly the team met with representatives of Longford Homes and La Cuentista subdivisions and held interviews with representatives of SAD 227 and the Volcano Cliffs Property Owners Association.

2. Land Use Scenarios

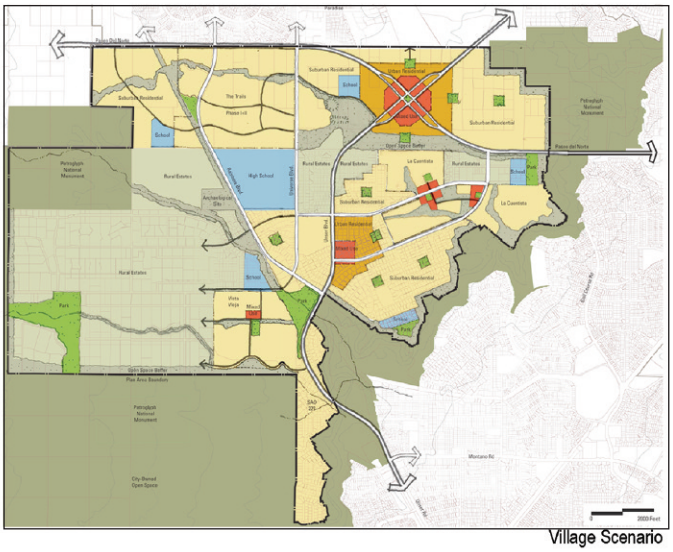
Based on analysis of information gained through interviews, agency meetings, and collection of materials, in December of 2004 the team prepared three scenarios that explored different ways to develop. (See **Exhibit 13 *Comparisons of Initial Scenarios***)



Trend Scenario



Town Center Scenario



Village Scenario

Comparison of Scenarios

Volcano Heights,
City of Albuquerque,
New Mexico

January, 2005

Comparison of Initial Scenarios

All figures are approximate.

Alternative	Dwelling Units	Population	Comm'l (Sq. Ft.)	Jobs
Trend	12,000	30,000	1,000,000	2,000
Town Center	12,000	30,000	6,500,000	20,000
Villages	8,000	20,000	350,000	500

LEGEND

- Town Center
- Village Center
- Urban Residential
- Suburban Residential
- Rural Residential
- Office Campus
- Schools
- Open Space/Buffer
- Petroglyph National Monument

Taecker Urban Design and Planning, LLC

Exhibit 13
Comparisons of Initial Scenarios

(1) Trend. This scenario assumed extension of current development patterns under present zoning to the undeveloped portions of the Plan Area. It illustrated projects that are in advanced and initial phases of development, along with application of similar suburban densities elsewhere in the Plan Area. Lots under 1 acre in the Volcano Cliffs area would remain as platted. Roughly 12,000 dwelling units and few jobs would result under this scenario.

(2) Village. This scenario emphasized protection of open space and cultural resources. Residential areas were organized around walkable villages with modest retail services. Substantial areas would remain rural in character. Roughly 8,000 dwelling units and few jobs would result under this scenario.

(3) Town Center. This scenario introduced a pedestrian-oriented town center at the Paseo del Norte-Unser intersection. Approximately 5,000,000 square feet of commercial and office space and approximately 20,000 jobs were initially assumed for the Town Center and Office Campus so that a mix of retail, entertainment and urban residential uses can be placed near each other at a location with excellent regional access. This scenario assumed the same number of dwelling units as under Trend (12,000 DUs) but offered more variety ranging from urban residential to rural estates. It organized development in a way that would allow adding critical land to the open space system.

3. Community Involvement Process

Design Workshops

The community process consisted of two major design workshops**.** The first, held in January 2005 and attended by over 150 people, provided opportunity for property owners, developers, civic and community participants to visualize how the area should develop.

After describing existing conditions, context and trends, the planning team presented the three alternative scenarios described above for consideration. Two days discussion and analysis followed, in which participants interacted with the professional planning team in small groups to analyze the pros and cons of the three scenarios. A modified version of the Town Center scenario was chosen as the preferred alternative. For more detail on this workshop, see the Planning Study Report, March 15, 2005.

Charrette Presentation, January, 2005

A second all-day planning workshop was held on October 13, 2005. The purpose was to inform community groups about the Volcano Heights draft Concept Plan and engage them in developing more detailed pedestrian, bicycle, transit, vehicular and land use solutions in a design session with the planning consultants. Groups participating

included the Transportation Forum, North Valley Coalition, 1000 Friends, Sierra Club, APS, and key agencies including City Transit Department, Municipal Development Department/Transportation, City Planning and MRCOG.

The workshop began with presentations on the planning framework including Centers and Corridors and Paseo del Norte (PdN) and Unser design requirements and access policy. Constraints on the plan include current transportation, zoning and utility policies and several development projects in the pipeline exempted from moratorium. Modifications to the population and land use assumptions of the Planned Growth Strategy and Metropolitan Transportation Plan are needed as well. Given these constraints, the plan for Volcano Heights presents an opportunity to create a sustainable growth pattern for this portion of the West Side.

Workshop participants discussed how the limited access policies for PdN and Unser affect street type, land use and pedestrian/transit-oriented design. Participants then broke into groups and worked with the consultants to draw their proposals for intersection treatment and transit and pedestrian connections. The Planning Team addressed these proposals by further exploring design standards for the Paseo and Unser intersection, analyzing a potential boulevard treatment, considering pedestrian/bicycle solutions across arterials, and modifying land use assumptions. The workshop led to a more detailed engineering study of intersection design and detailed modeling of the Concept Plan's impact on the West Side transportation network. (See Kimley-Horn Transportation Study in 4. below)

Presentations and Website comments

Placement of the Volcano Heights Planning Study Report on the City's website in March 2005 afforded a third means for the public and property owners to express their concerns. Comments were received through the volcanoheights@spinn.net e-mail link. Most responses expressed a desire to be kept informed on the plan and its schedule.

Presentations on the plan were made **to** stakeholder and community groups including the North Valley Coalition, neighborhood associations, the Volcano Cliffs Property Owners Association (VHPOA), Bedrock partners, and other major land owners.

Concerns and Issues

The community involvement process afforded opportunities for the planning team to hear from a large turnout of Volcano Cliffs Property Owners Association (VCPOA), other area property owners, developers active in the area, and from community groups. The following concerns and issues emerged to be addressed by the plan.

Property owner and developer issues:

- Desire for rapid implementation of the plan after years of waiting for development approval. Many property owners believe that the City of Albuquerque made commitments to provide utilities at property owner expense as a result of 1981 annexation and platting.
- Opposition to the magnitude of open space proposed in the plan unless open space funding is identified. Suggested funding sources are general fund, gross receipts tax, impact fees, or assessment with fair consideration of local versus citywide benefit.

- Requests for market feasibility studies for employment, mixed use and retail recommendations. Other employment opportunities at Double Eagle, Quail Ranch, Coors, Atrisco and Rio Rancho should be taken into consideration. Not all those who live in Volcano Heights will work there, and on-site employment should not be a condition of development.
- Development of Rural Estates with minimal city utilities for roads only, using shared water walls, environmentally friendly septic systems and allowance for minimum lot sizes under 10 acres.
- Concern that regulatory changes to zoning should not hold up the approval process
- Desire for agreement on phasing and sequencing schedule for development.
- Inter-agency agreements for joint use and co-location of schools, parks, recreation, libraries
- Desire to move the process along in a cooperative and timely manner through sector plans tied to Special Assessment Districts (SADs) and Public Improvement Districts (PIDs) using existing platting with voluntary assemblage

Community issues:

Transportation impacts and impacts of the Town Center scenario on traffic and bridge crossings emerged as a major concern in the second community workshop.

- Desire for additional open space for citywide view preservation and respect for cultural and ecological preservation
- Concern over exacerbating already existing infrastructure deficiencies on the West Side resulting from development
- Concern over capacity of the West Side transportation system to handle additional development in this location and potential east-west traffic impacts
- Request for Transportation and Transit Study to assess impact of the plan on regional system and land use relationships

If these owner and community issues can be addressed, participants in the design workshops supported creating a development character that is different than the rest of Albuquerque, that provides more choice in housing types, creates walkable communities, and offers a connected network of open space and trails. By focusing on comprehensive planning and quality design, participants saw that economic value, resource conservation, and broad city-wide benefits can be realized simultaneously. Next steps included development of design standards especially for town and village centers to define appropriate building scale, heights, and building forms with new zoning categories to accomplish the vision.

4. Transportation Studies

MRCOG Transportation Modeling

The Planning Team worked with the Mid Regional Council of Governments (MRCOG) to model the transportation impacts of the scenarios:

1) **Baseline** that assumes no development in Volcano Heights but where approved projects in the surrounding area are built.

2) **Trend** scenario where single-family densities that average 4.5 dwellings per gross area continue to prevail throughout the area, except near the intersection of Paseo del Norte and Unser where Bedrock Properties had retail and higher-density housing under consideration prior to this planning effort.

3) **Village** scenario, where development only occurs within the limits of existing water system, effectively down-zoning land beyond this zone.

4) **Town Center** scenario that brings about 18,000 new jobs to the West Side and places most jobs and housing within a short walk of retail conveniences and transit.

Additional analysis showed reduced travel (internalized) by land use scenario using assumptions based on mixed use and urban design criteria. Because of its balance of complementary land uses, the Town Center model assumed that 25% of trips would not need to leave the planning area or could be accommodated on transit (an assumption typically made for well-considered mixed-use projects and that can be enforced through development standards.)

Summary of Conclusions

Under the Baseline and Trend scenarios, substantial residential developments of approximately 100,000 planned additional population in the surrounding areas to the west and northwest result in Level of Service (LOS) F in the commute direction in many parts of the transportation system including river crossings. (See **Exhibit 14** ***Volcano Cliffs 2025 Trend Baseline Alternative PM Peak Hour Level of Service***). **Exhibit 15** ***Volcano Cliffs 2025 MTP PM Peak Hour Screenline Volumes*** shows regional travel demand even if no additional growth occurred in Volcano Cliffs.

When considering the amount of additional employment in the Town Center scenario (a 2200% increase over Trend), one could expect the impact of the Town Center on regional travel to be significant; however those differences are offset by the work trips captured by the Town Center. The Town Center performs somewhat better than the Trend and Village scenarios in the commute-direction where Montano crosses the Rio Grande. One exception is with arterial routes heading north of the planning area: during the afternoon commute, commuters generated by the Town Center will join commuters from existing jobs centers, who are also heading north.

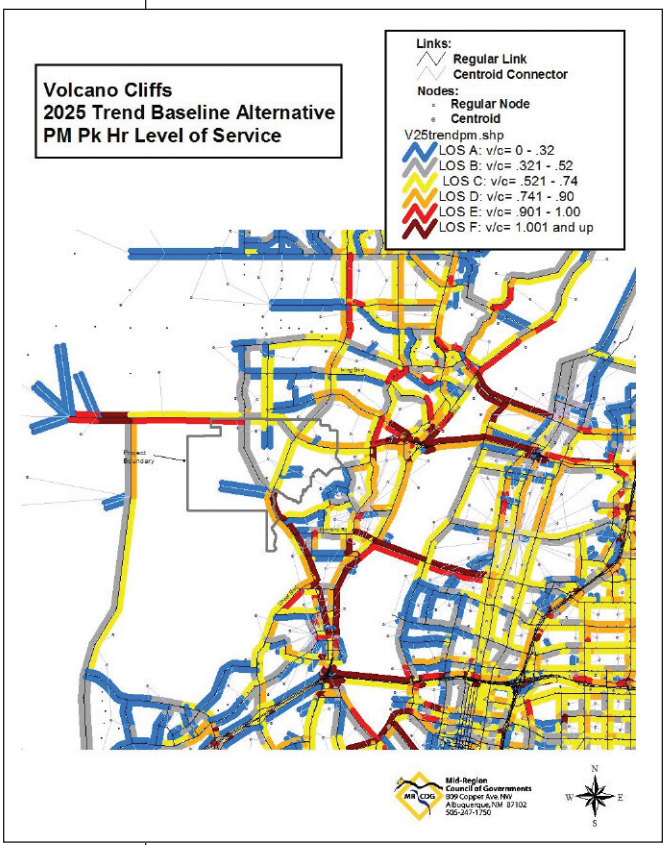


Exhibit 14

Table 3: Comparison of PM Peak Traffic Volumes

Volcano Heights Plan Area				October 5, 2005		
Route	Boundary	Direction	Baseline	Trend	Village	Town Ctr*
PdN	Eastern	Eastbound	1025	1448	1355	1778
		Westbound	1469	2099	1985	2042
	Western	Eastbound	2132	2386	2333	2210
		Westbound	1702	1641	1643	1772
Unser	Southern	Northbound	2308	3036	2855	2844
		Southbound	1663	2023	1938	2260
	Northern	Northbound	1382	1148	1194	1486
		Southbound	1003	1056	1052	1158
Universe	Northern	Northbound	1501	1257	1277	1523
		Southbound	963	1034	1011	1048
Rainbow	Northern	Northbound	1476	1341	1376	1425
		Southbound	922	954	944	923
Montano	Bridge	Eastbound	1083	1098	1094	1141
		Westbound	1574	1624	1608	1600
PdN	Bridge	Eastbound	5162	5247	5219	6243
		Westbound	6880	6988	6948	6587

Notes:
Modeling performed by MR-COG.
Yellow highlights Commute-Direction (direction with higher PM volumes)
Trip internalization expected with mixed-use, transit-supportive growth:
25% in Plan Area (enforced thru policy); 5% in surrounding areas.

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Reverse commute

Because of an emphasis on employment, the Town Center scenario makes better use of the reverse-commute capacity on the transportation network, i.e. eastbound PdN in the afternoon instead of westbound, and southbound on Unser instead of northbound. In the reverse-commute direction, Town Center jobs generate more traffic. Yet anticipated reverse-commute traffic volumes are well below commute-direction volumes. The capacity of reverse-commute facilities is significant and would not be utilized except for the Town Center's employment.

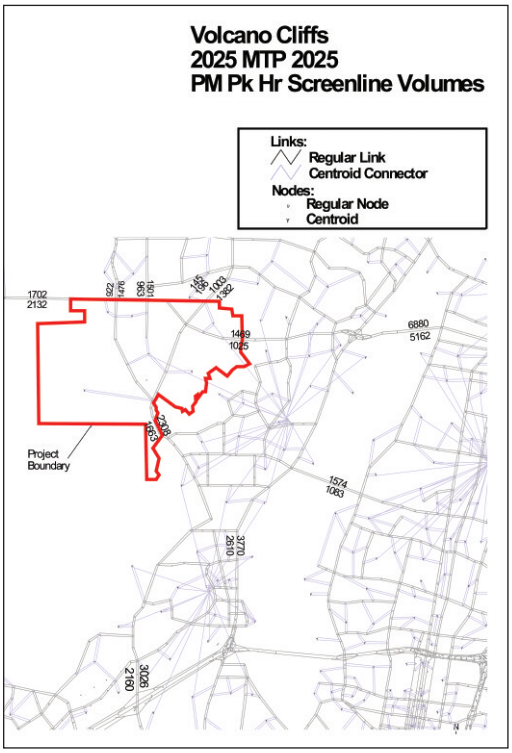


Exhibit 15
Volcano Cliffs 2025 MTP PM Peak Hour Screenline Volumes

Kimley-Horn Analysis (Volcano Heights Concept Plan–Transportation Operations Assessment and Boulevard Design Recommendations)

Urban Boulevard

The Town Center is a key feature of the Volcano Heights Plan objective of achieving jobs-housing balance on this portion of the West Side. Urban boulevards are especially well suited for town centers, where it is desirable to have building fronts and street activity facing transportation corridors while also minimizing through-traffic travel times.

The Volcano Heights Plan proposes that portions of Paseo del Norte and Unser traversing the proposed Town Center be designed as an urban boulevard that combines a high capacity throughfare with pedestrian-oriented frontages that encourage street activity. (See the Transportation Element of the Plan). This is accomplished by providing one-way frontages parallel to the street separated by a median with breaks that allow access to/from the roadway and frontage roads. This boulevard design allows a more pedestrian friendly land use plan for a higher density mixed-use Town Center while maintaining traffic capacity. The mix of uses, density, slower vehicular speeds on access roads, pedestrian friendly design features, and other architectural elements act to reduce the number of vehicular trips and their length and to encourage linked trips involving transit. The frontage roads serve fronting buildings and provide on-street parking, ample landscaping, and a pedestrian environment buffered from higher speed traffic by the frontage road itself.

Initial reviews of the boulevard proposal by local transportation planners and engineers produced concerns about the impact of its design on the flow of through traffic on Paseo del Norte and Unser Blvd. Both are planned as high volume regional Limited Access Roadways with minimum signalized intersection spacing of 1/2 mile. Concerns arose over planning proposals to reduce the spacing of signalized intersections from 1/2 mile to 1/4 mile through the Town Center and the impact of traffic turning into and out of the frontage roads interfering with the flow of traffic. The crux of the matter is the possible conflict between creating a mixed use, multi-modal transportation system appropriate to a pedestrian and transit-oriented urban center versus achieving a high volume of through traffic flow.

No local standard presently exists for urban boulevards, where arterial through-traffic is accommodated in center lanes, and local traffic and site access is accommodated on access lanes or frontage roads. The Planning Team asked that the traffic flow through the Town Center be modeled by a professional engineer to determine the impact of the proposed boulevard design on traffic movement and to provide design assistance especially for this portion of the roadway network. Kimley-Horn and Associates, a national transportation planning and engineering firm, provided the needed analysis.

The Kimley-Horn study compared the "Base Plan" intended to speed traffic through the area with the "Concept Plan" that contained several elements to address traffic flow through a balance of land use, transit, and roadway design. Transportation modeling was used to compare the traffic handling performance of the two alternative approaches. The model analyzed congestion levels at fourteen intersections in the Volcano

Heights Plan area as a whole, at Paseo del Norte and Unser travel times eastbound and westbound, distance traveled, average speed, and level of service.

Intersection Spacing

The Kimley-Horn analysis concluded that more frequent intersection spacing might be accommodated in a few limited locations with a negligible increase in travel times when moving through the planning area. Quarter-mile spacing for right-in/ right out intersections could also be accommodated with a negligible increase in travel times. Kimley-Horn reports: "The difference in total corridor travel time between the two scenarios is less than 60 seconds. This can be considered a negligible difference concluding that the Concept Plan does not significantly degrade level of service." In short, the many benefits of the Town Center can be achieved without materially reducing traffic flow.

Reviewers also raised concerns for the safety of merging traffic between the access road under the boulevard configuration and through traffic. Kimley-Horn modeled traffic flow at these access points and provided a conceptual design of the Paseo del Norte Boulevard which incorporated safety features that address the issue. The ***Conceptual Design of Paseo del Norte Blvd.*** is shown as Figure 2 in Kimley-Horn report.

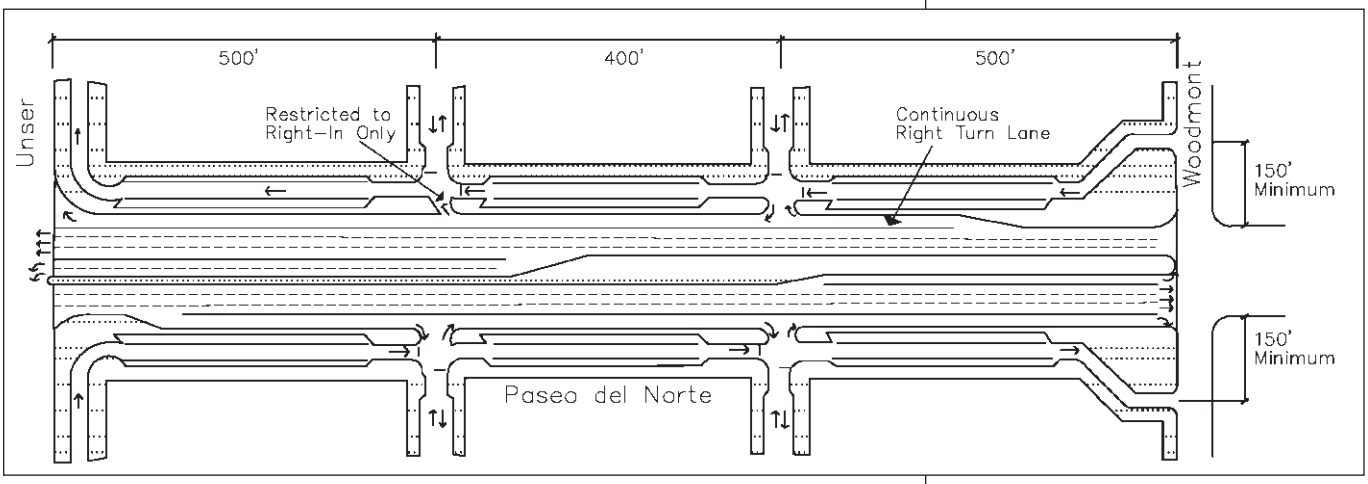


Figure 2
Conceptual Design of
Paseo del Norte Blvd.

Unser

In 1989 the Albuquerque City Council established alignment and design standards for Unser, stipulating that Unser be a parkway with not more than four travel lanes. The analysis shows that six travel lanes will be needed on Unser south of its intersection with Paseo del Norte, to reduce traffic congestion partly attributable to afternoon commuting from jobs toward the southeast to homes west and north of Volcano Heights.

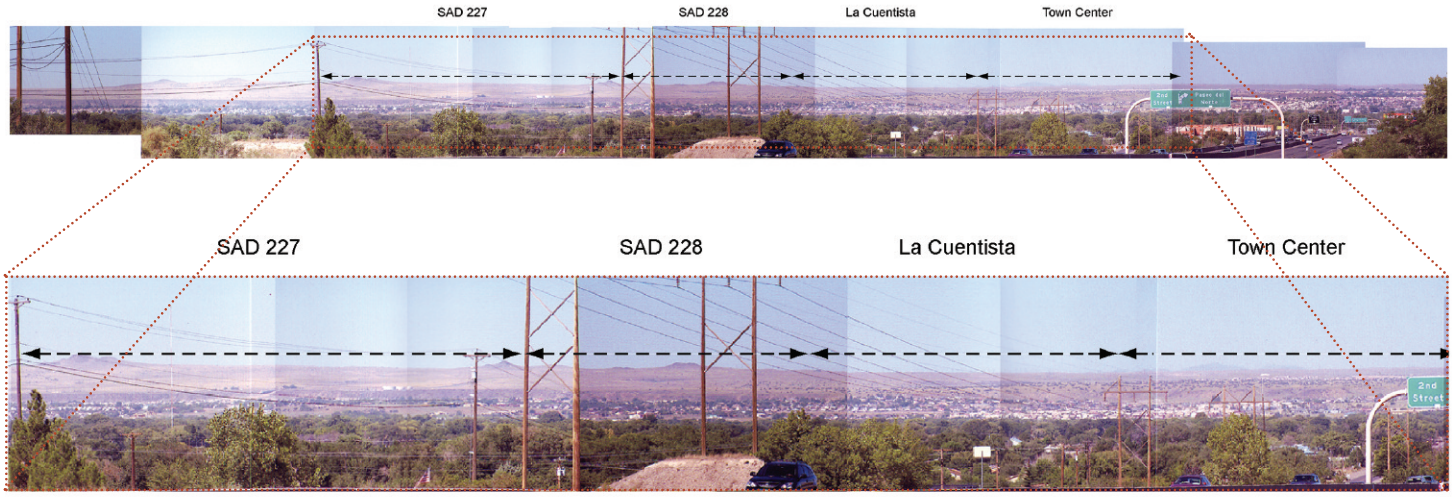
Kimley-Horn's ***Volcano Heights Concept Plan – Traffic Operations Assessment and Boulevard Design Recommendations*** report includes roadway configuration and traffic levels throughout the Volcano Heights road system, and design recommendations for key portions of Paseo del Norte and Unser. The design recommendations have been incorporated into the Volcano Heights Plan.

5. View Analysis

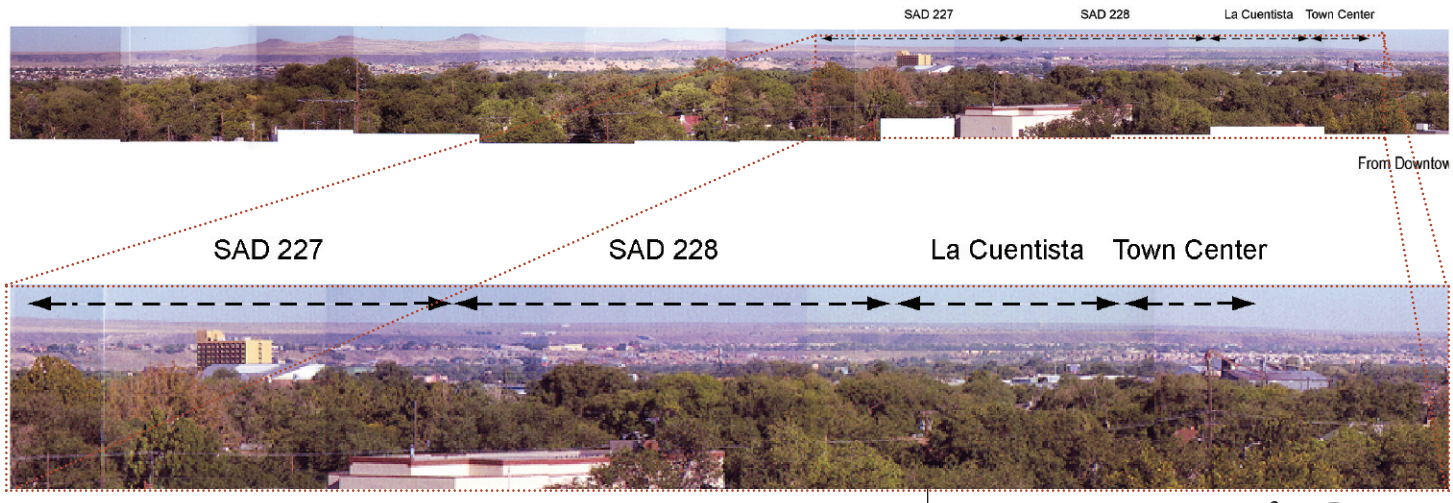
The volcanoes, rising above the volcanic escarpment on the western horizon of Albuquerque, form a dramatic backdrop to the city on the west, as the Sandia Mountains do to the east. They are an important part of Albuquerque's identity and a prominent natural feature framing the city. As described in the Meaning of Place section, for Native Americans, spiritual contemplation often embraced views to the Volcanoes, the Sandia Mountains and the Rio Grande, views that are appreciated by all cultures.

Development of the Volcano Heights Plan Area will impact views that residents see looking toward the western edge from the rest of the city. The Visual Sensitivity photo montage shows views toward the Plan Area from Downtown and from Paseo del Norte just west of I-25. It provides visual information on the extent to which different Plan Areas will be seen and where the new development will be located on the city's western horizon. From these distant locations the top of the escarpment is visible no

Exhibit 16
Visual Sensitivity photo montage shows views toward the Plan Area from Downtown and from Paseo del Norte just west of I-25.



from Paseo del Norte just west of I-25



from Downtown

matter how low the buildings are. The arrows indicate the approximate ranges of the land use districts.

Further analysis was done showing cross sections from Golf Course Road to the escarpment and from the Montano and Unser intersection northward. The additional open space setback that the Plan calls for along the Escarpment appears to be sufficient to keep development from being seen from these points. An exception is the Suburban Residential area east of the Town Center and north of Paseo del Norte. Golf Course represents a point east before descending into the alluvial basin of the Rio Grande; Volcano Heights is not visible from any point along Coors, the western edge of the basin.

Views to the volcanoes and the Geologic Windows from within the Plan Area will be protected per guidelines in the Urban Design section.

Design standards for color and reflectivity will help to mitigate the impact of development visible from distant locations.